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Notice of Allowability	Application No.	Applicant(s)	
	10/021,376	HARLES ET AL.	
	Examiner	Art Unit	
	Sudhanshu C. Pathak	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to February 3rd, 2005.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ The drawings filed on December 6th, 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. Claims 1-to-6 are pending in the application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with William R. McClellan on March 9th, 2005.

In order to avoid a 35 U.S.C. 112 2nd, Paragraph Rejection the claims have been amended as follows:

In Claim 1, line 5, replace "modulating said clean carrier signal" with
.....modulating a clean carrier signal.....

In Claim 1, line 6, replace "to generate said spreaded" with
.....to generate a spreaded.....

In Claim 1, line 21, replace "and/or" with
.....and.....

In Claim 3, lines 6 & lines 8, replace " $f'(t)$ " with
..... $f'(t)$

In Claim 3, line 12, replace " $f'(t)$ " with
..... $f'(t)$

In Claim 4, line 5, replace "said clean carrier" with

.....a clean carrier.....

In Claim 4, line 7, replace "to generate said spreaded" with

.....to generate a spreaded.....

In Claim 4, line 22, replace "and/or" with

.....and.....

In Claim 6, line 11, replace "f" with

..... $f(t)$

Allowable Subject Matter

3. Claims 1-to-6 are allowable over the prior art of record because the cited references do not contain the specified limitation of a method for determining characteristics of components of a satellite communication channel comprising: generating a first pseudo noise signal $PN(t)$; modulating a clean carrier signal $f(t)$ with said first pseudo noise signal $PN(t)$ to generate a spreaded clean carrier signal $s(t)$; transmitting said spreaded clean carrier signal $s(t)$ through said communication channel at a first predetermined level; receiving a receive signal $s'(t)$ corresponding to said spreaded clean carrier signal $s(t)$ after having traveled through said communication channel; correlating said receive signal $s'(t)$ with said first pseudo noise signal $PN(t)$ to generate said despreaded carrier signal $f(t)$; determining the group delay of the communication channel at the selected frequency of the clean carrier signal $f(t)$ on the basis of the time delay between the first pseudo noise signal $PN(t)$ and said receive signal $s'(t)$; and determining

the amplitude response of the communication channel at the selected frequency of the clean carrier signal $f(t)$ on the basis of the correlation peak between the first pseudo noise signal $PN(t)$ and said receive signal $s'(t)$.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak


STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

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